

## SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> Method of reinforcing antibody activity

<130> C1-A0321P

<150> JP 2003-415760

<151> 2003-12-12

<160> 28

<170> PatentIn version 3.1

<210> 1

<211> 1924

<212> DNA

<213> *Macaca fascicularis*

<220>

<221> CDS

<222> (11).. (1918)

<223>

<400> 1

gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc 49

Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu

1 5 10

ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc 97

Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser

15 20 25

ttg ctg gcc tcg gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt 145

Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe

30	35	40	45	
gag gac ctc act tgc ttc tgg gat gag gaa gag gca gca ccc agt ggg				193
Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly				
	50	55	60	
aca tac cag ctg ctg tat gcc tac ccg ggg gag aag ccc cgt gcc tgc				241
Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys				
	65	70	75	
ccc ctg agt tct cag agc gtg ccc cgc ttt gga acc cga tac gtg tgc				289
Pro Leu Ser Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys				
	80	85	90	
cag ttt cca gcc cag gaa gaa gtg cgt ctc ttc tct ccg ctg cac ctc				337
Gln Phe Pro Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu				
	95	100	105	
tgg gtg aag aat gtg ttc cta aac cag act cag att cag cga gtc ctc				385
Trp Val Lys Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu				
110	115	120	125	
ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc				433
Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala				
	130	135	140	
atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gcc cca				481
Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro				
	145	150	155	
gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc				529
Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro				
	160	165	170	
aaa gat ctc aag aac tcc act ggt ccc acg gtc ata cag ttg atc gcc				577
Lys Asp Leu Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala				

175	180	185	
aca gaa acc tgc tgc cct gct ctg cag agg cca cac tca gcc tct gct			625
Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala			
190	195	200	205
ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga			673
Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly			
	210	215	220
cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gca gtg			721
Pro Lys Gln Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val			
	225	230	235
ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg			769
Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp			
	240	245	250
ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg			817
Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp			
	255	260	265
gga tcc tgg tcc ctc cct gtg act gtg gac ctg cct gga gat gca gtg			865
Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val			
270	275	280	285
gca att gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt			913
Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys			
	290	295	300
caa tgg cag caa gag gac cat gct agt tcc caa ggt ttc ttc tac cac			961
Gln Trp Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His			
	305	310	315
agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag gac			1009
Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp			

320	325	330	
tgt gaa gag gaa gag aaa aca aat cca gga tta cag acc cca cag ttc			1057
Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe			
335	340	345	
tct cgc tgc cac ttc aag tca cga aat gac agc gtt att cac atc ctt			1105
Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu			
350	355	360	365
gtg gag gtg acc aca gcc ctg ggt gct gtt cac agt tac ctg ggc tcc			1153
Val Glu Val Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser			
370	375	380	
cct ttc tgg atc cac cag gct gtg cgc ctc ccc acc cca aac ttg cac			1201
Pro Phe Trp Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His			
385	390	395	
tgg agg gag atc tcc agc ggg cat ctg gaa ttg gag tgg cag cac cca			1249
Trp Arg Glu Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro			
400	405	410	
tca tcc tgg gca gcc caa gag acc tgc tat caa ctc cga tac aca gga			1297
Ser Ser Trp Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly			
415	420	425	
gaa ggc cat cag gac tgg aag gtg ctg gag ccg cct ctc ggg gcc cga			1345
Glu Gly His Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg			
430	435	440	445
gga ggg acc ctg gag ctg cgc ccg cga tct cgc tac cgt tta cag ctg			1393
Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu			
450	455	460	
cgc gcc agg ctc aat ggc ccc acc tac caa ggt ccc tgg agc tcg tgg			1441
Arg Ala Arg Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp			

465	470	475	
tcg gac cca gct agg gtg gag acc gcc acc gag acc gcc tgg att tcc			1489
Ser Asp Pro Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser			
480	485	490	
ttg gtg acc gct ctg ctg cta gtg ctg ggc ctc agc gcc gtc ctg ggc			1537
Leu Val Thr Ala Leu Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly			
495	500	505	
ctg ctg ctg ctg agg tgg cag ttt cct gca cac tac agg aga ctg agg			1585
Leu Leu Leu Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg			
510	515	520	525
cat gcc ctg tgg ccc tca ctt cca gat ctg cac cga gtc cta ggc cag			1633
His Ala Leu Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln			
530	535	540	
tac ctt agg gac act gca gcc ctg agt ccg ccc aag gcc aca gtc tca			1681
Tyr Leu Arg Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser			
545	550	555	
gat acc tgt gaa gaa gtg gaa ccc agc ctc ctt gaa atc ctc ccc aag			1729
Asp Thr Cys Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys			
560	565	570	
tcc tca gag agg act cct ttg ccc ctg tgt tcc tcc cag tcc cag atg			1777
Ser Ser Glu Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met			
575	580	585	
gac tac cga aga ttg cag cct tct tgc ctg ggg acc atg ccc ctg tct			1825
Asp Tyr Arg Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser			
590	595	600	605
gtg tgc cca ccc atg gct gag tca ggg tcc tgc tgt acc acc cac att			1873
Val Cys Pro Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile			

610	615	620	
gcc aac cat tcc tac cta cca cta agc tat tgg cag cag cct tga			1918
Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro			
625	630	635	

gtcgac

1924

&lt;210&gt; 2

&lt;211&gt; 635

&lt;212&gt; PRT

<213> *Macaca fascicularis*

&lt;400&gt; 2

Met	Pro	Ser	Trp	Ala	Leu	Phe	Met	Val	Thr	Ser	Cys	Leu	Leu	Leu	Ala
1				5					10					15	

Pro	Gln	Asn	Leu	Ala	Gln	Val	Ser	Ser	Gln	Asp	Val	Ser	Leu	Leu	Ala
			20						25					30	

Ser	Asp	Ser	Glu	Pro	Leu	Lys	Cys	Phe	Ser	Arg	Thr	Phe	Glu	Asp	Leu
		35					40					45			

Thr	Cys	Phe	Trp	Asp	Glu	Glu	Glu	Ala	Ala	Pro	Ser	Gly	Thr	Tyr	Gln
	50						55					60			

Leu	Leu	Tyr	Ala	Tyr	Pro	Gly	Glu	Lys	Pro	Arg	Ala	Cys	Pro	Leu	Ser
65					70					75					80

Ser	Gln	Ser	Val	Pro	Arg	Phe	Gly	Thr	Arg	Tyr	Val	Cys	Gln	Phe	Pro
				85					90					95	

Ala	Gln	Glu	Glu	Val	Arg	Leu	Phe	Ser	Pro	Leu	His	Leu	Trp	Val	Lys
				100					105					110	

Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu Phe Val Asp  
 115 120 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly  
 130 135 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro Ala Pro Glu  
 145 150 155 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Lys Asp Leu  
 165 170 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr  
 180 185 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln  
 195 200 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln  
 210 215 220

Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val Gly Gly Ser  
 225 230 235 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu  
 245 250 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp  
 260 265 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Ile Gly  
 275 280 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln  
 290 295 300

Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala  
 305 310 315 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp Cys Glu Glu  
 325 330 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys  
 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu Val Glu Val  
 355 360 365

Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser Pro Phe Trp  
 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu  
 385 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp  
 405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His  
 420 425 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr  
 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg  
 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro  
 465 470 475 480

Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr  
 485 490 495



Ala Leu Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu  
                   500                  505                  510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu  
                   515                  520                  525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg  
                   530                  535                  540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys  
                   545                  550                  555                  560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu  
                   565                  570                  575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met Asp Tyr Arg  
                   580                  585                  590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro  
                   595                  600                  605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His  
                   610                  615                  620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro  
                   625                  630                  635

<210> 3

<211> 24

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized sequence

<400> 3

caggggccag tggatagact gatg

24

<210> 4

<211> 23

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized sequence

<400> 4

gctcactgga tgggtgggaag atg

23

<210> 5

<211> 411

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1).. (411)

<223>

<400> 5

atg gaa tgg cct ttg atc ttt ctc ttc ctc ctg tca gga act gca ggt

48

Met Glu Trp Pro Leu Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly

1 5 10 15

gtc cac tcc cag gtt cag ctg cag cag tct gga cct gag ctg gtg aag

96

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys

20 25 30

cct ggg gcc tca gtg aag att tcc tgc aag gct tct ggc tat gca ttc

144

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe

35 40 45

act aac tcc tgg atg aac tgg gtg aag cag agg cct gga aag ggt ctt 192  
 Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu  
 50 55 60

gag tgg att gga cgg att tat cct gga gat gga gaa act atc tac aat 240  
 Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn  
 65 70 75 80

ggg aaa ttc agg gtc aag gcc aca ctg act gca gac aaa tcc tcc agc 288  
 Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser  
 85 90 95

aca gcc tac atg gat atc agc agc ctg aca tct gag gac tct gcg gtc 336  
 Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val  
 100 105 110

tac ttc tgt gca aga ggc tat gat gat tac tcg ttt gct tac tgg ggc 384  
 Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly  
 115 120 125

caa ggg act ctg gtc act gtc tct gca 411  
 Gln Gly Thr Leu Val Thr Val Ser Ala  
 130 135

<210> 6

<211> 137

<212> PRT

<213> Mus musculus

<400> 6

Met Glu Trp Pro Leu Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly  
 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys  
 20 25 30

atg agg tgc cta gct gag ttc ctg ggg ctg ctt gtg ttc tgg att cct 48  
Met Arg Cys Leu Ala Glu Phe Leu Gly Leu Leu Val Phe Trp Ile Pro  
1 5 10 15

gga gcc att ggg gat att gtg atg act cag gct gca ccc tct ata cct 96  
 Gly Ala Ile Gly Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro  
                   20                                  25                                  30

gtc act cct gga gag tca gta tcc atc tcc tgt agg tct agt aag agt 144  
 Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser  
                   35                                  40                                  45

ctc ctg cat agt aat ggc aac act tac ttg tat tgg ttc ctg cag agg 192  
 Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg  
                   50                                  55                                  60

cca ggc cag tct cct caa ctc ctg ata tat cgg atg tcc aac ctt gcc 240  
 Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala  
                   65                                  70                                  75                                  80

tca gga gtc cca gat agg ttc agt ggc agt ggg tca gga act gct ttc 288  
 Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe  
                                   85                                  90                                  95

aca ctg aga atc agt aga gtg gag gct gag gat gtg ggt gtt tat tac 336  
 Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr  
                                   100                                  105                                  110

tgt atg caa cat ata gaa tat cct ttt acg ttc gga tcg ggg acc aag 384  
 Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys  
                   115                                  120                                  125

ctg gaa ata aaa 396  
 Leu Glu Ile Lys  
                   130

<210> 8

<211> 132

<212> PRT

<213> Mus musculus

<400> 8

Met Arg Cys Leu Ala Glu Phe Leu Gly Leu Leu Val Phe Trp Ile Pro

1 5 10 15

Gly Ala Ile Gly Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro

20 25 30

Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser

35 40 45

Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg

50 55 60

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala

65 70 75 80

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe

85 90 95

Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr

100 105 110

Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys

115 120 125

Leu Glu Ile Lys

130

<210> 9

<211> 30

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 9

tagaattcca ccatggaatg gcctttgatc

30

<210> 10

<211> 56

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 10

agcctgagtc atcacaatat ccgatccgcc tccacctgca gagacagtga ccagag

56

<210> 11

<211> 56

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 11

actctggtea ctgtctctgc aggtggaggc ggatcggata ttgtgatgac tcagge

56

<210> 12

<211> 60

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 12

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60

<210> 13

<211> 8

<212> PRT

<213> Artificial

<220>

<223> an artificially synthesized FLAG tag sequence

<400> 13

Asp Tyr Lys Asp Asp Asp Asp Lys

1

5

<210> 14

<211> 85

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 14

tagaattcca ccatggaatg gcctttgatc tttctcttcc tcctgtcagg aactgcaggt 60

gtccactccc aggttcagct gcagc 85

<210> 15

<211> 82

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 15

tgagtcatca caatatccga tccgccacca cccgaaccac caccacccga accaccacca 60



cctgcagaga

cagtgaccag

ag

82

&lt;210&gt; 16

&lt;211&gt; 82

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; an artificially synthesized primer sequence

&lt;400&gt; 16

tggtcactgt ctctgcaggt ggtggtggtt cgggtggtgg tggttcgggt ggtggcggat 60

cggatattgt gatgactcag gc

82

&lt;210&gt; 17

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; an artificially synthesized primer sequence

&lt;400&gt; 17

caggttcagc tgcagcagtc tggac 25

&lt;210&gt; 18

&lt;211&gt; 81

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; an artificially synthesized primer sequence

&lt;400&gt; 18

gctgcagctg aacctgcgat ccaccgcctc ccgaaccacc accacccgat ccaccacctc 60

cttttatttc cagcttggtc c 81

&lt;210&gt; 19

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 19

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala  
 1 5 10 15

Ser Val Lys Ile Ser Cys Arg Ala Phe Gly Tyr Ala Phe Ser Asn Ser  
 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile  
 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe  
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys  
 85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr  
 100 105 110

Leu Val Thr Val Ser Ala  
 115

&lt;210&gt; 20

<211> 118

<212> PRT

<213> Mus musculus

<400> 20

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala  
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser  
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile  
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe  
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr  
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys  
85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr  
100 105 110

Leu Val Thr Val Ser Ala  
115

<210> 21

<211> 118

<212> PRT

<213> Mus musculus

<400> 21

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala

1	5	10	15
Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Ser			
20	25	30	
Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile			
35	40	45	
Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe			
50	55	60	
Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr			
65	70	75	80
Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys			
85	90	95	
Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr			
100	105	110	
Leu Val Thr Val Ser Ala			
115			

<210> 22  
 <211> 115  
 <212> PRT  
 <213> Mus musculus

<400> 22  
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala  
 1 5 10 15  
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr  
 20 25 30  
 Trp Val Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile

35

40

45

Gly Arg Ile His Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe

50

55

60

Lys Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65

70

75

80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys

85

90

95

Ala Ser Gly Gly Trp Phe Ala Ser Trp Gly Gln Gly Thr Leu Val Thr

100

105

110

Val Ser Ala

115

<210> 23

<211> 116

<212> PRT

<213> Mus musculus

<400> 23

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln

1

5

10

15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp

20

25

30

Tyr Ala Trp Ser Trp Ile Arg Gln Leu Pro Gly Asn Lys Leu Glu Trp

35

40

45

Met Gly Tyr Ile Thr Tyr Ser Gly Tyr Ser Ile Tyr Asn Pro Ser Leu

50

55

60

Lys Ser Arg Ile Ser Ile Ser Arg Asp Thr Ser Lys Asn Gln Leu Phe

65		70		75		80									
Leu	Gln	Leu	Asn	Ser	Val	Thr	Thr	Glu	Asp	Thr	Ala	Thr	Tyr	Tyr	Cys
			85						90					95	
Val	Gly	Gly	Tyr	Asp	Asn	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Ser	Val
			100					105					110		
Thr	Val	Ser	Ser												
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Asp	Ile	Val	Met	Thr	Gln	Ala	Ala	Pro	Ser	Val	Pro	Val	Thr	Pro	Gly
1			5					10					15		
Glu	Ser	Val	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Lys	Ser	Leu	Leu	His	Ser
		20						25					30		
Asn	Gly	Asn	Thr	Tyr	Leu	Tyr	Trp	Phe	Leu	Gln	Arg	Pro	Gly	Gln	Ser
		35					40					45			
Pro	Gln	Leu	Leu	Ile	Tyr	Arg	Met	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro
	50					55					60				
Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Ala	Ala	Phe	Thr	Leu	Arg	Ile
65				70					75				80		
Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	Cys	Met	Gln	His
			85					90					95		
Leu	Glu	Tyr	Pro	Tyr	Thr	Phe	Gly	Ser	Gly	Thr	Lys	Leu	Glu	Ile	Lys

100

105

110

&lt;210&gt; 25

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 25

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly

1

5

10

15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser

20

25

30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro

50

55

60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Ala Ala Phe Thr Leu Arg Ile

65

70

75

80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His

85

90

95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys

100

105

110

&lt;210&gt; 26

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 26

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly

1	5	10	15
Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser			
20	25	30	
Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser			
35	40	45	
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro			
50	55	60	
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile			
65	70	75	80
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His			
85	90	95	
Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys			
100	105	110	

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 Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser  
 20 25 30  
 Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser  
 35 40 45  
 Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro



50		55		60
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Thr Ile				
65		70		80
Ser Ser Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His				
	85		90	95
Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys				
	100		105	110
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Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly				
1	5		10	15
Glu Lys Val Thr Leu Thr Cys Ser Ala Ser Ser Ser Val Ser Ser Ser				
	20		25	30
His Leu Tyr Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Leu Trp				
	35		40	45
Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser				
	50		55	60
Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Asn Met Glu				
65		70		80
Thr Glu Asp Ala Ala Ser Tyr Phe Cys His Gln Trp Ser Ser Tyr Pro				
	85		90	95
Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys				

100

105